ORDINANCE NO. NS-2510

AN ORDINANCE OF THE CITY COUNCIL AMENDING BEND DEVELOPMENT CODE (BDC) CHAPTERS 1.2, DEFINITIONS, 2.7, SPECIAL PLANNED DISTRICTS, REFINEMENT PLANS, AREA PLANS AND MASTER PLANS, 4.9, ANNEXATIONS AND 5.1, VARIANCES TO COMPLY WITH THE OREGON MODEL FLOOD HAZARD MANAGEMENT ORDINANCE

Recitals

A. The State of Oregon has in ORS 197.175 delegated the responsibility to the City of Bend to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry.

B. The flood hazard areas of the City of Bend are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

C. These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

D. The amendments update BDC 2.7.640, Floodplain Zone to comply with the Oregon Model Flood Hazard Management Ordinance and include updated definitions, requirements, and administrative procedures.

E. The Oregon Model Flood Hazard Management Ordinance is based on the minimum requirements of the National Flood Insurance Program (NFIP) found in the Code of Federal Regulations (CFRs), Oregon's statewide land use planning Goal 7, Areas Subject to Natural Hazards, and the Oregon specialty codes. The Oregon Model Flood Hazard Management Ordinance was prepared by Oregon Department of Land Conservation and Development (DLCD) and has been reviewed and approved by Federal Emergency Management Agency (FEMA) Region X.

F. The application was processed in accordance with Bend Development Code (BDC) 4.1.500. The City provided timely and sufficient notice of the legislative changes pursuant to Section 4.1.515 of the Bend Development Code.

G. The City submitted a Notice of Proposed Amendment to DLCD on July 30, 2024.

H. Notice of the September 9, 2024, Planning Commission public hearing was printed in the Bend Bulletin on August 18, 2024, and mailed and emailed to the Neighborhood Districts on August 16, 2024. A notice of the October 16, 2024, City Council public hearing was printed in the Bend Bulletin on September 22, 2024, and mailed and emailed to the Neighborhood Districts on September 16, 2024.

I. On October 9, 2024, the Planning Commission held a public hearing on Project Number PLTEXT20240438, and deliberated on the matter. The Planning Commission voted to recommend that the City Council approve the proposed text amendments in Exhibit A.

J. The City Council held a public hearing on October 16, 2024, to accept evidence, receive public testimony, and consider the Planning Commission's recommendation. The City Council found that the amendments satisfy the criteria for approval contained in Section 4.6.200 of the Bend Development Code and voted to approve the text amendments to the Bend Development Code.

Based on these findings, THE CITY OF BEND ORDAINS AS FOLLOWS:

Section 1. The Bend Development Code is amended as depicted in attachment Exhibit A.

Section 2. In addition to the recitals set forth above, the City Council adopts and incorporates the findings in Exhibit B.

Section 3. If any provision, section, phrase, or word of this ordinance or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions that can be given effect without the invalid provision or application.

Section 4. All other provisions of the Bend Development Code remain unchanged by this ordinance and remain in effect.

First Reading Date: October 16, 2024

Second Reading and adoption by roll call vote: November 6, 2024

YES: Mayor Melanie Kebler
Mayor Pro Tem Megan Perkins
Councilor Anthony Broadman
Councilor Ariel Méndez
Councilor Mike Riley
Councilor Megan Norris

NO: none

Melanie Kebler, Mayor

ATTEST:

Morgen Fry, City Recorder

Approved as to form:

Mary A. Winters, City Attorney

Exhibit A
Bend Development Code Update
July 24, 2024
Prepared by: Planning Division

Note:

Text in underlined typeface is proposed to be added

Text in ~~strikethrough~~ typeface is proposed to be deleted.

***Indicates where text from the existing code has been omitted because it will remain unchanged.

Staff comments are ***bold and italicized***

DRAFT

Chapter 1.2

DEFINITIONS

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~~**Area of special flood hazard** means the land within a community that is in a floodplain subject to a one percent or greater chance of flooding in any given year as designated by the Federal Emergency Management Agency (FEMA). Flood hazard designations on FEMA maps always include the letters A or V. Same as "base flood."~~ ***(Revised and relocated to BDC 2.7.615, Definitions)***

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~~**Base flood** means the flood designated by FEMA as having a one percent chance of being equaled or exceeded in any given year, also referred to as the "100-year flood." Designation on FEMA maps always includes the letter A or V. Same as "area of special flood hazard."~~ ***(Revised and relocated to BDC 2.7.615, Definitions)***

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~~**Critical facility** means, for the purpose of flood standards, a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire~~

~~and emergency response installations, and installations which produce, use or store hazardous materials or hazardous waste.~~ ***(Relocated to BDC 2.7.615, Definitions)***

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~~**Flood/flooding** means a general and temporary condition of partial or complete inundation of normally dry land areas from:~~

~~1. The overflow of inland or tidal waters; and/or~~

~~2. The unusual and rapid accumulation of runoff of surface waters from any source.~~

(Revised and relocated to BDC 2.7.615, Definitions)

~~**Flood hazard area** means the relatively flat area of lowlands adjoining the channel of a river, stream, watercourse, lake or reservoir.~~

~~**Flood Insurance Rate Map (FIRM)** means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.~~ ***(Revised and relocated to BDC 2.7.615, Definitions)***

~~**Flood Insurance Study** means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.~~ (***Revised and relocated to BDC 2.7.615, Definitions for Flood Elevation Study)***

~~**Floodway** means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot as designated on FIRM.~~ ***(Revised and relocated to BDC 2.7.615, Definitions)***

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Manufactured dwelling means:

- **Residential trailer** means a structure constructed for movement on the public highways that has sleeping, cooking and plumbing facilities, that is intended for human occupancy, that is being used for residential purposes and that was constructed before January 1, 1962.

- **Mobile home** means a structure constructed for movement on the public highways that has sleeping, cooking and plumbing facilities, that is intended for human occupancy, that is being used for residential purposes and that was constructed between January 1, 1962, and June 15, 1976, and met the construction requirements of Oregon mobile home law in effect at the time of construction.

- **Manufactured home**, except as provided in subsection (a) of this definition, means a structure constructed for movement on the public highways that has sleeping, cooking and plumbing facilities, that is intended for human occupancy, that is being used for residential purposes and that was constructed in accordance with federal manufactured housing construction and safety standards and regulations in effect at the time of construction.

~~For floodplain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days,~~

a. For purposes of implementing any contract pertaining to manufactured homes between the department and the federal government, manufactured home has the meaning given the term in the contract.

- **Manufactured dwelling** does not include any building or structure constructed to conform to the State of Oregon Structural Specialty Code or the Low-Rise Residential Dwelling Code or any unit identified as a recreational vehicle by the manufacturer.

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~~**Recreational vehicle** means, for floodplain management purposes, a vehicle which is:~~

~~1. Built on a single chassis;~~

~~2. Four hundred square feet or less when measured at the largest horizontal projection;~~

~~3. Designed to be self-propelled or permanently towable by a light duty truck; and~~

~~4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.~~

(Relocated to BDC 2.7.615, Definitions)

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~~**Substantial damage** means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.~~ (***Relocated to BDC 2.7.615, Definitions)***

~~**Substantial improvement** means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:~~

~~1. Before the improvement or repair is started; or~~

~~2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.~~

~~The term does not, however, include either:~~

~~1. Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or~~

~~2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.~~

(Revised and relocated to BDC 2.7.615, Definitions)

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Chapter 2.7

SPECIAL PLANNED DISTRICTS, REFINEMENT PLANS, AREA PLANS AND MASTER PLANS

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Article V. Waterway Overlay Zone (WOZ)

2.7.600 Waterway Overlay Zone (WOZ).

2.7.610 Purpose.

2.7.615 Definitions.

2.7.620 Riparian Corridor Sub-Zone.

2.7.630 River Corridor Areas of Special Interest Sub-Zone.

2.7.640 Floodplain ~~Combining~~ Zone.

2.7.650 Deschutes River Corridor Design Review Combining Zone.

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2.7.615 Definitions.

The following words and phrases used in this chapter, which supplement the definitions found in BDC Chapter 1.2 and elsewhere in this code, have the following meanings:

Appeal means a request for a review of the interpretation of any provision of this ordinance or a request for a variance.

Area of special flood hazard means the land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. It is shown on the Flood Insurance Rate Map (FIRM) as Zone A, AO, AH, A1-30, AE, A99, and AR. “Special flood hazard area” is synonymous in meaning and definition with the phrase “area of special flood hazard”.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE) means the elevation to which floodwater is anticipated to rise during the base flood.

Basement means any area of the building having its floor subgrade (below ground level) on all sides.

Below-grade crawl space means an enclosed area below the base flood elevation in which the interior grade is not more than two feet below the lowest adjacent exterior grade and the height, measured from the interior grade of the crawlspace to the top of the crawlspace foundation, does not exceed four feet at any point.

Critical facility means, for the purpose of flood standards, a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use or store hazardous materials or hazardous waste. ***(Relocated from BDC 1.2, Definitions)***

Development means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Flood or Flooding:

1. A general and temporary condition of partial or complete inundation of normally dry land areas from:
    a. The overflow of inland or tidal waters.
    b. The unusual and rapid accumulation or runoff of surface waters from any source.
    c. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (1)(a) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1)(a) of this definition.

(Revised and relocated from BDC 1.2, Definitions)

Flood elevation study: An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Flood Insurance Rate Map (FIRM) means the official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM). ***(Revised and relocated from BDC 1.2, Definitions)***

Flood Insurance Study (FIS). See "Flood elevation study". ***(Revised and relocated from BDC 1.2, Definitions)***

Flood proofing means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Also referred to as "Regulatory Floodway." ***(Revised and relocated from BDC 1.2, Definitions)***

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
   a. By an approved state program as determined by the Secretary of the Interior or
   b. Directly by the Secretary of the Interior in states without approved programs.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

Manufactured dwelling means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured dwelling" does not include a "recreational vehicle" and is synonymous with "manufactured home".

Manufactured dwelling park or subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured dwelling lots for rent or sale. See BDC Chapter 3.6, Special Standards for Certain Uses, for standards related to manufactured dwelling parks.

Mean sea level means for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction means, for floodplain management purposes, structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by the City of Bend and includes any subsequent improvements to such structures.

Recreational vehicle means, for floodplain management purposes, a vehicle which is:

1. Built on a single chassis;

2. Four hundred square feet or less when measured at the largest horizontal projection;

3. Designed to be self-propelled or permanently towable by a light duty truck; and

4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

(Relocated from BDC 1.2, Definitions)

Special flood hazard area. See "Area of special flood hazard" for this definition.

Start of construction includes, for floodplain management purposes, substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured dwelling on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured dwelling.

Substantial damage means damage of any origin sustained by a structure whereby the cost of the restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. ***(Relocated from BDC 1.2, Definitions)***

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

(Revised and relocated from BDC 1.2, Definitions)

Variance means a grant of relief from the terms of a flood plain management regulation.

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

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2.7.640 Floodplain ~~Combining~~ Zone.

A. *Statutory Authority, Findings of Fact, Purpose and Methods.*

1. *Statutory Authorization.* The State of Oregon has in ORS 197.175 delegated the responsibility to the City of Bend to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry.

2. *Findings of Fact.*

a. The flood hazard areas of the City of Bend are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

b. These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

3. ***Statement of Purpose.*** It is the purpose of this zone to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

~~1.~~ a. To protect human life and health;

~~2.~~ b. To minimize expenditure of public money and costly flood control projects;

~~3.~~ c. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

~~4.~~ d. To minimize prolonged business interruptions;

~~5.~~ e.To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;

~~6.~~ f.To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazards areas so as to minimize future flood blight areas caused by flooding;

~~7.~~ g.To ensure that potential buyers are notified that property is in an area of special flood hazard; ~~and~~

~~8.~~ h.To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions~~.~~; and

i. Participate in and maintain eligibility for flood insurance and disaster relief.

4. ***Methods of Reducing Flood Losses.*** In order to accomplish its purposes, the zone includes methods and provisions for:

a. Restricting or prohibiting development which is dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

b. Requiring that development vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

c. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

d. Controlling filling, grading, dredging, and other development which may increase flood damage;

e. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

~~B. Application of FP Zone.~~

~~1. The FP Combining Zone shall apply to the areas identified on the Flood Insurance Rate Map (FIRM) as special flood hazard areas inundated by 100-year flood and floodway areas. The FIA Flood Insurance Study for "Deschutes County, Oregon and Incorporated Areas" and the FIRM map dated September 28, 2007, are hereby adopted and by this reference included herein. The Flood Insurance Study is on file at the Planning Division. The A and AE Zones shown on the FIRM map are hereby zoned FP.~~

~~2. The Planning Director is hereby appointed to administer and implement the Floodplain Combining Zone by granting or denying development permit applications in accordance with its provisions. Duties and responsibilities of the Planning Director shall include, but not be limited to:~~

~~a. Review all development permits to determine that the permit requirements of this code have been satisfied.~~

~~b. Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required.~~

~~c. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of subsection (M)(1) of this section are met.~~

~~d. Make interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). A person contesting the location of the special flood hazard boundary shall be given an opportunity to seek a declaratory ruling or to appeal the interpretation as provided in BDC Chapter 4.1.~~

~~3. When base flood elevation data has not been provided on the FIRM, the Planning Director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, in order to administer this section.~~

~~4. Information to Be Obtained and Maintained.~~

~~a. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required as in subsection (B)(3) of this section, verify and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.~~

~~b. For all new or substantially improved floodproofed structures, verify and record the actual elevation (in relation to mean sea level) to which the structure was floodproofed and maintain the floodproofing certifications required in subsection (G)(2) of this section.~~

B. *General Provisions.*

1. *Lands to which this Ordinance Applies.* This zone applies to all special flood hazard areas within the jurisdiction of the City of Bend

2. *Basis For Establishing the Special Flood Hazard Areas.* The special flood hazard areas identified by the Federal Insurance Administrator in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for Deschutes County, Oregon and Incorporated Areas, dated September 28, 2007, with accompanying Flood Insurance Rate Maps (FIRMS) Panels 0650 through 0664 are hereby adopted by reference and declared to be a part of this ordinance. The FIS and FIRM panels are on file at the City of Bend Community and Economic Development Department.

3. *Coordination with State of Oregon Specialty Codes.* The Oregon Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in special flood hazard areas. This section is intended to be administered and enforced in conjunction with the Oregon Specialty Codes.

4. *Compliance and Penalties for Noncompliance.*

a. ***Compliance.*** All development within special flood hazard areas is subject to the terms of this ordinance and required to comply with its provisions and all other applicable regulations.

b. ***Penalties for Noncompliance.*** No structure or land can be constructed, located, extended, converted, or altered without full compliance with the terms of this section and other applicable regulations. Violations of the provisions of this section by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) constitute a Class A civil infraction in compliance with BDC Chapter 1.3, Enforcement. Nothing contained herein prevents the City of Bend from taking such other lawful action as is necessary to prevent or remedy any violation.

5. *Abrogation and Severability.*

a. ***Abrogation.*** This section is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this section and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions must prevail.

b. ***Severability.*** This section is declared to be severable. If any section clause, sentence, or phrase is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding must in no way effect the validity of the remaining portions of this section.

6. ***Interpretation.*** In the interpretation and application of this ordinance, all provisions must be:

a. Considered as minimum requirements;

b. Liberally construed in favor of the governing body; and

c. Deemed neither to limit nor repeal any other powers granted under state statutes.

7. Warning and Disclaimer of Liability.

a. ***Warning.*** The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This code does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages.

b. ***Disclaimer of Liability.*** This code does not create liability on the part of the City of Bend, any officer or employee thereof, or the Federal Insurance Administrator, for any flood damages that result from reliance on this code or any administrative decision made hereunder.***(Relocated from BDC 2.7.640.C and includes minor revisions.)***

C. Administration.

1. ***Designation of the Floodplain Administrator.*** The Planning Manager and their designee are hereby appointed as the Floodplain Administrator to administer, implement, and enforce this section by granting or denying development permits in accordance with its provisions. The Floodplain Administrator may delegate authority to implement these provisions.

2. ***Duties and Responsibilities of the Floodplain Administrator.*** Duties of the Floodplain Administrator, or their designee, include, but not be limited to:

a. ***Permit Review***.

i. Review all development permits to determine that the permit requirements of this section have been satisfied.

ii. Review all development permits to determine that all other required local, state, and federal permits have been obtained and approved.

iii. Review all development permits to determine if the proposed development is located in a floodway. If located in the floodway, assure that the floodway provisions in subsection 2.7.640(D)(2)(d) of this section are met.

iv. Review all development permits to determine if the proposed development is located in an area where Base Flood Elevation (BFE) data is available either through the Flood Insurance Study (FIS) or from another authoritative source. If BFE data is not available, then ensure compliance with the provisions of subsection 2.7.640(D)(1)(g) of this section.

v. Provide to building officials the Base Flood Elevation (BFE) applicable to any building requiring a development permit.

vi. Review all development permit applications to determine if the proposed development qualifies as a substantial improvement as defined in BDC 2.7.615, Definitions.

vii. Review all development permits to determine if the proposed development activity is a watercourse alteration. If a watercourse alteration is proposed, ensure compliance with the provisions in subsection 2.7.640(D)(1)(a) of this section.

viii. Review all development permits to determine if the proposed development activity includes the placement of fill or excavation.

b. ***Information to be Obtained and Maintained.*** The following information must be obtained and maintained and must be made available for public inspection as needed:

i. Obtain, record, and maintain the actual elevation (in relation to mean sea level) of the lowest floor (including basements) and all attendant utilities of all new or substantially improved structures where Base Flood Elevation (BFE) data is provided through the Flood Insurance Study (FIS), Flood Insurance Rate Map (FIRM), or obtained in accordance with subsection 2.7.640(D)(1)(g) of this section.

ii. Obtain and record the elevation (in relation to mean sea level) of the natural grade of the building site for a structure prior to the start of construction and the placement of any fill and ensure that the requirements of subsections 2.7.640(D)(2)(d) and 2.7.640(C)(2)(a)(ii) of this section are adhered to.

iii. Upon placement of the lowest floor of a structure (including basement) but prior to further vertical construction, obtain documentation, prepared and sealed by a professional licensed surveyor or engineer, certifying the elevation (in relation to mean sea level) of the lowest floor (including basement).

iv. Where base flood elevation data are utilized, obtain As-built certification of the elevation (in relation to mean sea level) of the lowest floor (including basement) prepared and sealed by a professional licensed surveyor or engineer, prior to the final inspection.

v. Maintain all Elevation Certificates (EC) submitted to City of Bend;

vi. Obtain, record, and maintain the elevation (in relation to mean sea level) to which the structure and all attendant utilities were floodproofed for all new or substantially improved floodproofed structures where allowed under this ordinance and where Base Flood Elevation (BFE) data is provided through the FIS, FIRM, or obtained in accordance with subsection 2.7.640(D)(1)(g) of this section.

vii. Maintain all floodproofing certificates required under this ordinance;

viii. Record and maintain all variance actions, including justification for their issuance;

ix. Obtain and maintain all hydrologic and hydraulic analyses performed as required under subsection 2.7.640(D)(2)(d) of this section.

x. Record and maintain all Substantial Improvement and Substantial Damage calculations and determinations as required under subsection 2.7.640(C)(2)(d) of this section.

xi. Maintain for public inspection all records pertaining to the provisions of this ordinance.

c. *Requirements to Notify Other Entities and Submit New Technical Data.*

i. *Community Boundary Alterations*. The Floodplain Administrator must notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community's boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority. ***(Also put in BDC Chapter 4.9, Annexations)***

ii. *Watercourse Alterations.* Notify adjacent communities, the Department of Land Conservation and Development, and other appropriate state and federal agencies, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration. This notification must be provided by the applicant to the Federal Insurance Administration as a Letter of Map Revision (LOMR) along with either:

(A) A proposed maintenance plan to assure the flood carrying capacity within the altered or relocated portion of the watercourse is maintained; or

(B) Certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

The applicant must submit a Conditional Letter of Map Revision (CLOMR) when required under subsection 2.7.640(C)(2)(c)(iii) of this section. Ensure compliance with all applicable requirements in subsection 2.7.640(C)(2)(c)(iii) and 2.7.640(D)(1)(a). ***(Revised and relocated from 2.7.640.D)***

iii. ***Requirement to Submit New Technical Data.***

A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community must notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Section 44 of the Code of Federal Regulations (CFR), Sub-Section 65.3. The community may require the applicant to submit such data and review fees required for compliance with this section through the applicable FEMA Letter of Map Change (LOMC) process.

The Floodplain Administrator must require a Conditional Letter of Map Revision (CLOMR) prior to the issuance of a floodplain development permit for:

(A) Proposed floodway encroachments that increase the base flood elevation; and

(B) Proposed development which increases the base flood elevation by more than one foot in areas where FEMA has provided base flood elevations but no floodway.

An applicant must notify FEMA within six (6) months of project completion when an applicant has obtained a Conditional Letter of Map Revision (CLOMR) from FEMA. This notification to FEMA must be provided as a Letter of Map Revision (LOMR).

The applicant is responsible for preparing all technical data to support CLOMR/LOMR applications and paying any processing or application fees associated with the CLOMR/LOMR.

The Floodplain Administrator is under no obligation to sign the Community Acknowledgement Form, which is part of the CLOMR/LOMR application, until the applicant demonstrates that the project will or has met the requirements of this code and all applicable state and federal laws.

(The purpose of the last two paragraphs is not required under the NFIP but it makes it clear that applicants are required to develop the technical information and cover the costs associated with LOMR applications, and specifying this helps to manage community members' expectations. The second paragraph assists in conveying that a

community does not have to sign-off on a CLOMR/LOMR if they find that the project does not meet the requirements of their local code, or any state or federal laws.)

d. ***Substantial Improvement and Substantial Damage Assessments and Determinations.*** Conduct Substantial Improvement (SI) (as defined in BDC 2.7.615, Definitions) reviews for all structural development proposal applications and maintain a record of SI calculations within permit files in accordance with subsection 2.7.640(C)(2)(b) of this section. Conduct Substantial Damage (SD) (as defined in BDC 2.7.615, Definitions) assessments when structures are damaged due to a natural hazard event or other causes. Make SD determinations whenever structures within the special flood hazard area (as established in subsection 2.7.640.B.2 of this section) are damaged to the extent that the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

3. ***Establishment of Development Permit.***

a. ***Floodplain Development Permit Required.*** A development permit must be obtained before construction or development begins within any area horizontally within the special flood hazard area established in subsection 2.7.640.B.2 of this section. The development permit is required for all structures, including manufactured dwellings, and for all other development, as defined in BDC 2.7.615, Definitions, including fill and other development activities. ***(Revised and relocated from 2.7.640.E)***

b. ***Application for Development Permit.*** Application for a development permit may be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans drawn to scale showing the nature, location, dimensions, and elevations of the area in question, existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

i. In riverine flood zones, the proposed elevation (in relation to mean sea level), of the lowest floor (including basement) and all attendant utilities of all new and substantially improved structures; in accordance with the requirements of subsection 2.7.640(C)(2)(b) of this section.

ii. Proposed elevation in relation to mean sea level to which any non-residential structure will be floodproofed.

iii. Certification by a registered professional engineer or architect licensed in the State of Oregon that the floodproofing methods proposed for any non-residential structure meet the floodproofing criteria for non-residential structures in subsection 2.7.640(D)(2)(c)(iii) of this section.

iv. Description of the extent to which any watercourse will be altered or relocated.

v. Base Flood Elevation data for subdivision proposals or other development when required per subsections 2.7.640(C)(2)(a) and 2.7.640(D)(1)(f) of this section.

vi. Substantial improvement calculation for any improvement, addition, reconstruction, renovation, or rehabilitation of an existing structure.

vii. The amount and location of any fill or excavation activities proposed.

(Revised and relocated from 2.7.640.E.2 and F)

D. *Provisions for Flood Hazard Reduction.*

1. ***General Standards.*** In all special flood hazard areas, the following standards apply:

a. ***Alteration of Watercourses***. Require that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained. Require that maintenance is provided within the altered or relocated portion of said watercourse to ensure that the flood carrying capacity is not diminished. Require compliance with subsections 2.7.640(C)(2)(c)(ii) and (iii) of this section. ***(Revised and relocated from 2.7.640.D)***

b. ***Anchoring.***

i. All new construction and substantial improvements must be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

ii. All manufactured dwellings must be anchored per subsection.2.7.640(D)(2)(c)(iv) of this section. ***(Relocated from 2.7.640.I)***

c. ***Construction Materials and Methods.***

i. All new construction and substantial improvements must be constructed with materials and utility equipment resistant to flood damage. ***(Relocated from 2.7.640.H.1)***

ii. All new construction and substantial improvements must be constructed using methods and practices that minimize flood damage. ***(Relocated from 2.7.640.H.2)***

d. ***Utilities and Equipment.***

i. ***Water Supply, Sanitary Sewer, and On-site Waste Disposal Systems.***

(A) All new and replacement water supply systems must be designed to minimize or eliminate infiltration of flood waters into the system.

(B) New and replacement sanitary sewage systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(C) On-site waste disposal systems must be located to avoid impairment to them or contamination from them during flooding consistent with the Oregon Department of Environmental Quality.

(Revised and relocated from 2.7.640.L)

ii. ***Electrical, Mechanical, Plumbing, and Other Equipment.*** Electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities must be elevated at or above the base flood level or be designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during conditions of flooding. In addition, electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities must:

(A) If replaced as part of a substantial improvement must meet all the requirements of this section.

(Revised and relocated from 2.7.640.H.3)

e. *Tanks. (New)*

i. Underground tanks must be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood.

ii. Above-ground tanks must be installed a minimum of one foot above the base flood level or be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood.

f. *Subdivision Proposals and other Proposed Developments.*

i. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, must include within such proposals, Base Flood Elevation data.

ii. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) must:

(A) Be consistent with the need to minimize flood damage.

(B) Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.

(C) Have adequate drainage provided to reduce exposure to flood hazards.

(Revised and relocated from 2.7.640.J.1 and 3)

g. *Use of Other Base Flood Data.* When Base Flood Elevation data has not been provided in accordance with subsection 2.7.640(B)(2) of this section the local Floodplain Administrator must

obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, in order to administer subsection 2.7.640(D) of this section. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) must meet the requirements of subsection 2.7.640(D)(1)(f) of this section.

Base Flood Elevations must be determined for development proposals that are 5 acres or more in size or are 50 lots or more, whichever is lesser in any A zone that does not have an established base flood elevation. Development proposals located within a riverine unnumbered A Zone must be reasonably safe from flooding; the test of reasonableness includes use of historical data, high water marks, FEMA provided Base Level Engineering data, and photographs of past flooding, or other methods where available. When no base flood elevation data is available, development proposals located within a riverine unnumbered A Zone must be elevated a minimum of two feet above the highest adjacent grade to be reasonably safe from flooding.

h. ***Structures Located in Multiple or Partial Flood Zones.*** In coordination with the State of Oregon Specialty Codes:

i. When a structure is located in multiple flood zones on the community's Flood Insurance Rate Maps (FIRM), the provisions for the more restrictive flood zone apply.

ii. When a structure is partially located in a special flood hazard area, the entire structure must meet the requirements for new construction and substantial improvements.

i. ***Critical Facilities.*** Construction of new critical facilities must be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of new critical facilities must be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA must have the lowest floor elevated three feet above the Base Flood Elevation (BFE) or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility must also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. ***(Relocated from 2.7.640.O)***

2. ***Specific Standards for Riverine Flood Zones.*** These specific standards apply to all new construction and substantial improvements in addition to the General Standards contained in subsection 2.7.640(D)(1) of this section.

a. ***Flood Openings.*** All new construction and substantial improvements with fully enclosed areas below the lowest floor (excluding basements) are subject to the following requirements. Enclosed areas below the base flood elevation, including crawl spaces must:

i. Be designed to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters;

ii. Be used solely for parking, storage, or building access;

iii. Be certified by a registered professional engineer or architect or meet or exceed all of the following minimum criteria:

(A) A minimum of two openings,

(B) The total net area of non-engineered openings must be not less than one (1) square inch for each square foot of enclosed area, where the enclosed area is measured on the exterior of the enclosure walls,

(C) The bottom of all openings must be no higher than one foot above grade.

(D) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they must allow the automatic flow of floodwater into and out of the enclosed areas and must be accounted for in the determination of the net open area.

(E) All additional higher standards for flood openings in the State of Oregon Residential Specialty Codes Section R322.2.2 must be complied with when applicable.

(Revised and relocated from 2.7.640.G.1.b)

b. *Garages. (New)*

i. Attached garages may be constructed with the garage floor slab below the base flood elevation (BFE) in riverine flood zones, if the following requirements are met:

(A) If located within a floodway, the proposed garage must comply with the requirements of subsection 2.7.640(D)(2)(d) of this section;

(B) The floors are at or above grade on not less than one side;

(C) The garage is used solely for parking, building access, and/or storage;

(D) The garage is constructed with flood openings in compliance with subsection 2.7.640(D)(2(a) of this section to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater.

(E) The portions of the garage constructed below the BFE are constructed with materials resistant to flood damage;

(F) The garage is constructed in compliance with the standards in subsection 2.7.640(D)(1) of this section; and

(G) The garage is constructed with electrical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.

ii. Detached garages must be constructed in compliance with the standards for appurtenant structures in subsection 2.7.640(D)(2)(c)(vi) of this section or non-residential structures in subsection 2.7.640(D)(2)(c)(iii) of this section depending on the square footage of the garage.

c. *For Riverine Special Flood Hazard Areas with Base Flood Elevations.* In addition to the general standards listed in section 5.1, the following specific standards apply in Riverine special flood hazard areas with Base Flood Elevations (BFE): Zones A1-A30, AH, AND AE.

i. *Before Regulatory Floodway.* In areas where a regulatory floodway has not been designated, no new construction, substantial improvement, or other development (including fill) must be permitted within zones A1-30 and AE on the community's Flood Insurance Rate Map (FIRM), unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community. ***(Revised and relocated from 2.7.640.N)***

ii. *Residential Construction.*

(A) New construction, conversion to, and substantial improvement of any residential structure must have the lowest floor, including basement, elevated a minimum of one foot above base flood elevation. ***(Relocated from 2.7.640.G.1.a)***

(B) Enclosed areas below the lowest floor must comply with the flood opening requirements in subsection 2.7.640(D)(2)(a) of this section. ***(Revised and relocated from 2.7.640.G.1.b.)***

iii. *Non-Residential Construction.*

(A) New construction, conversion to, and substantial improvement of any commercial, industrial, or other non-residential structure must:

1. Have the lowest floor, including the basement, elevated at or above the Base Flood Elevation (BFE); or,
2. Together with the attendant utility and sanitary facilities:
   i. Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water; and
   ii. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
   iii. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this section based on their development and/or review

of the structural design, specifications and plans. Such certifications must be provided to the Floodplain Administrator as set forth in subsection 2/7/640(C)(2)(b) of this section.

(B) Non-residential structures that are elevated, not floodproofed, must comply with the standards for enclosed areas below the lowest floor in subsection 2.7.640(D)(2)(a) of this section.

(C) Applicant's floodproofing non-residential buildings must be notified that flood insurance premiums will be based on rates that are one (1) foot below the floodproofed level (e.g. a building floodproofed to the base flood level will be rated as one (1) foot below. ***(Revised and relocated from 2.7.640.G.2)***

iv. *Manufactured Dwellings.*

(A) Manufactured dwellings to be placed (new or replacement) or substantially improved that are supported on solid foundation walls must be constructed with flood openings that comply with subsection 2.7.640(D)(2)(a) of this section; ***(Revised and relocated from 2.7.640K.1)***

(B) The bottom of the longitudinal chassis frame beam must be at or above Base Flood Elevation. ***(Current code requires manufactured dwellings in AH and AE to be elevated on a permanent foundation such that the lowest floor of the manufactured home is a minimum of one foot above the base flood elevation.)***

(C) Manufactured dwellings to be placed (new or replacement) or substantially improved must be anchored to prevent flotation, collapse, and lateral movement during the base flood. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques). (***Relocated from BDC 2.7.640.I.2)***

(D) Electrical crossover connections must be a minimum of twelve (12) inches above Base Flood Elevation (BFE).

v. *Recreational Vehicles.* Recreational vehicles placed on sites are required to either:

(A) Be on the site for fewer than 180 consecutive days; and

(B) Be fully licensed and ready for highway use, on its wheels or jacking system, be attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

(C) Meet the requirements of manufactured dwellings in subsection (D)(2)(c)(iv) of this section and the elevation and anchoring requirements for manufactured dwellings. ***(Relocated from 2.7.640.G.5)***

vi. ***Appurtenant (Accessory) Structures.*** Relief from elevation or flood proofing requirements for residential and non-residential structures in riverine flood zones may be granted for appurtenant structures that meet the following requirements:

(A) Appurtenant structures located partially or entirely within the floodway must comply with requirements for development within a floodway found in subsection 2.7.640(D)(2)(d) of this section.

(B) Appurtenant structures must only be used for parking, access, and/or storage and must not be used for human habitation.

(C) In compliance with State of Oregon Specialty Codes, appurtenant structures on properties that are zoned residential are limited to one-story structures less than 200 square feet, or 400 square feet if the property is greater than two (2) acres in area and the proposed appurtenant structure will be located a minimum of 20 feet from all property lines. Appurtenant structures on properties that are zoned as non-residential are limited in size to 120 square feet.

(D) The portions of the appurtenant structure located below the Base Flood Elevation must be built using flood resistant materials.

(E) The appurtenant structure must be adequately anchored to prevent flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.

(F) The appurtenant structure must be designed and constructed to equalize hydrostatic flood forces on exterior walls and comply with the requirements for flood openings in subsection 2.7.640(D)(2)(a) of this section.

(G) Appurtenant structures must be located and constructed to have low damage potential.

(H) Appurtenant structures must not be used to store toxic material, oil, or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality unless confined in a tank installed incompliance with subsection 2.7.640(D)(1)(e) of this section.

(I) Appurtenant structures must be constructed with electrical, mechanical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.

(New)

vii. ***Below-Grade Crawl Spaces.*** Below-grade crawlspaces are allowed subject to the following standards:

(A) The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required flood openings stated in subsection 2.7.640(D)(2)(c)(vii)(B) of this section. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.

(B) The crawlspace is an enclosed area below the base flood elevation (BFE) and must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one foot above the lowest adjacent exterior grade.

(C) Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.

(D) Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.

(E) The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade.

(F) The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed four feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.

(G) There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time

after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity or mechanical means.

(H) The velocity of floodwaters at the site should not exceed five feet per second for any crawlspace. For velocities in excess of five feet per second, other foundation types should be used.

(Relocated from 2.7.640.G.3)

d. ***Floodways***. Located within the special flood hazard areas established in subsection 2.7.640(B)(2) in this section are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of the floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

i. Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless:

(A) Certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment must not result in any increase in flood levels within the community during the occurrence of the base flood discharge; or, ***(Revised and relocated from 2.7.640.M.1)***

(B) A community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that a Conditional Letter of Map Revision (CLOMR) is applied for and approved by the Federal Insurance Administrator, and the requirements for such revision as established under Volume 44 of the Code of Federal Regulations, section 65.12 are fulfilled.

ii. If the requirements of section subsection 2.7.640(D)(2)(d)(i) of this section are satisfied, all new construction, substantial improvements, and other development must comply with all other applicable flood hazard reduction provisions of subsection 2.7.640(D) of this section. ***(Relocated from 2.7.640.M.2)***

e. Standards for Shallow Flooding Areas. Shallow flooding areas appear on FIRMs as AO zones with depth designations or as AH zones with Base Flood Elevations. For AO zones the base flood depths range from one (1) to three (3) feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. For both AO and AH zones, adequate drainage

paths are required around structures on slopes to guide floodwaters around and away from proposed structures. ***(Shallow Flooding Areas, from Model Code in case these zones (AH, AO) are added in a future map revision (LOMR or PMR), in which case the code would need to be updated to include these standards.)***

i. Standards for AH Zones. Development within AH Zones must comply with the standards in subsections (D)(1), (D)(2) and (D)(2)(e) of this section.

ii. Standards for AO Zones. In AO zones, the following provisions apply in addition to the requirements in subsections (D)(1) and (D)(2)(e) of this section:

(A) New construction, conversion to, and substantial improvement of residential structures and manufactured dwellings within AO zones must have the lowest floor, including basement, elevated above the highest grade adjacent to the building, at minimum to or above the depth number specified on the Flood Insurance Rate Maps (FIRM) - at least two (2) feet if no depth number is specified. For manufactured dwellings the lowest floor is considered to be the bottom of the longitudinal chassis frame beam.

(B) New construction, conversion to, and substantial improvements of non-residential structures within AO zones must either:

1. Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, at minimum to or above the depth number specified on the Flood Insurance Rate Maps (FIRMS) - at least two (2) feet if no depth number is specified; or

2. Together with attendant utility and sanitary facilities, be completely floodproofed to or above the depth number specified on the FIRM, a minimum of two (2) feet above the highest adjacent grade if no depth number is specified, so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. If this method is used, compliance must be certified by a registered professional engineer or architect as stated in subsection (D)(2)(c)(iii)((A))(2)(iii) of this section.

(C) Recreational vehicles placed on sites within AO Zones on the community's Flood Insurance Rate Maps (FIRM) must either:

1. Be on the site for fewer than 180 consecutive days, and

2. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or

3. Meet the elevation requirements of subsection (D)(2)(e)(ii)((A)) of this section and the anchoring and other requirements for manufactured dwellings of subsection (D)(2)(c)(iv) of this section.

(D) In AO zones, new and substantially improved appurtenant structures must comply with the standards in subsection (D)(2)(c)(vi) of this section.

(E) In AO zones, enclosed areas beneath elevated structures must comply with the requirements in subsection (D)(2)(a) of this section.

~~C. Warning and Disclaimer of Liability. The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This code does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This code shall not create liability on the part of the City of Bend, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this code or any administrative decision made hereunder.~~ ***(Relocated to BDC 2.7.640.B.7)***

~~D. Alteration of Watercourses.~~

~~1. Prior to any alteration or relocation of a watercourse, notice of the proposed alteration shall be given to affected, adjacent communities and appropriate State agencies such as the Department of Land Conservation and Development and the State Department of Water Resources. The Planning Director shall also submit evidence of such notification to the Federal Insurance Administration.~~

~~2. The applicant shall maintain the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.~~

(Relocated to 2.7.640.D.1.a)

E. Permit for Use or Development in an FP Zone. No development shall occur in an FP Zone unless a permit has been received for the work. Except for improvement of an existing structure which is less than substantial, as determined by the City, no permit shall be issued unless the work will be reasonably safe from flooding, otherwise complies with this code, and all necessary State, Federal, and local permits will be obtained as a condition of approval on any permit in an FP Zone. The following information shall be submitted with the permit application:

1. The location of the property with reference to channel stations and flood profile elevations.
2. The existing topography and proposed grading plan for the property. Contour intervals shall not be more than one-foot for ground slopes up to five percent and, for areas immediately adjacent to a stream, two-foot for ground slopes between five and 10 percent, and five-foot for greater slopes.
3. The location of existing and proposed diking or revetments, if any.
4. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher flood insurance rates.

(Revised and relocated to 2.7.640.C.3.a. and b.)

F. Structural Elevation Data Required.

1. A building permit application for substantial improvement to an existing structure or for a new structure within an FP Zone shall contain the following data referenced to mean sea level:
   a. The level of the lowest habitable floor and of any basement floor whether or not intended to be habitable. This information shall be submitted on FEMA Form 81-31.
   b. The level to which the structure is to be floodproofed, if applicable.
2. A statement which notes whether the structure contains a basement.
3. The information required by this subsection shall be maintained in the files of the Building Department with the subject building permit.

(Revised and relocated to 2.7.640.C.3.b)

G. Regulation of Structures in an FP Zone.

1. Residential Construction.
   a. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated a minimum of one foot above base flood elevation. ***(Revised and relocated to 2.7.640.D.2.c.ii.A)***

b. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

i. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

ii. Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

iii. The bottom of all openings shall be no higher than one foot above grade.

(Revised and relocated to 2.7.640.D.2.a)

2. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

a. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the City's Building Official.

d. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in subsection (G)(1)(b) of this section.

e. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building constructed to the base flood level will be rated as one foot below that level). ***(Revised and relocated to2.7.640 D.2.C.iii)***

3. Crawlspace Construction. Below-grade crawlspaces are allowed subject to the following standards as found in FEMA Technical Bulletin 11-01, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas:

a. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in subsection (G)(3)(b) of this section. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.

b. The crawlspace is an enclosed area below the base flood elevation (BFE) and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one foot above the lowest adjacent exterior grade.

c. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.

d. Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.

e. The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade.

f. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed four feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.

g. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity or mechanical means.

h. The velocity of floodwaters at the site should not exceed five feet per second for any crawlspace. For velocities in excess of five feet per second, other foundation types should be used.

(Relocated to 2.7.640.D.2.c.vii)

4. Manufactured Homes. All manufactured homes to be placed or substantially improved within Zones AH or AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is a minimum of one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of subsection (I)(2) of this section. ***(Revised and relocated to 2.7.640.D.2.c.iv)***

5. Recreational Vehicles. Recreational vehicles placed on sites are required to either:

   a. Be on the site for fewer than 180 consecutive days;

   b. Be fully licensed and ready for highway use, on its wheels or jacking system, be attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

   c. Meet the requirements of subsection (G)(3) of this section and the elevation and anchoring requirements for manufactured homes. ***(Relocated to 2.7.640.D.2.c.v)***

H. Construction Materials and Methods.

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage. ***(Relocated to 2.7.640.D.1.c.i)***

2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage. ***(Relocated to 2.7.640.D.1.c.ii)***

3. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding. ***(Relocated to 2.7.640.D.1.d.ii)***

I. Anchoring.

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

(Relocated and revised to 2.7.640.D.1.b)

J. Land Development Standards in a Flood Hazard Area.

1. In addition to the terms of subsections (J) and (K) of this section, a subdivision or other land development, including all utility facilities, within an FP Zone shall be designed, located, and

~~constructed to minimize flood damage, including special provisions for adequate drainage to reduce exposure to flood hazards.~~

~~2. A land development which will alter or relocate a watercourse shall be designed, constructed and maintained to retain the flood carrying capacity of the watercourse.~~

~~3. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or five acres (whichever is less).~~ ***(Relocated and revised to 2.7.640.D.1.g)***

~~K. Manufactured Home Development Standards.~~

~~1. All manufactured homes to be placed or substantially improved within Zones AH and AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is a minimum of one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of subsection (I)(2) of this section.~~ ***(Revised and relocated to 2.7.640.D.2.c.iv)***

~~2. The placement of a manufactured home in the floodway is prohibited.~~ ***(Deleted requirement)***

~~L. Utilities Standards in a Flood Hazard Area.~~

~~1. A public utility or facility associated with a land development within a FP Zone shall be designed, located and constructed to minimize or eliminate flood damage and to avoid raising the water elevation in a regulatory floodway.~~

~~2. Any new or replacement water supply system shall be designed, located and constructed to minimize or eliminate infiltration of floodwaters into the system.~~

~~3. Any new or replacement sewerage system shall be designed, located and constructed to minimize or eliminate infiltration of floodwaters into the system and discharge from the system into the floodwaters.~~

(Relocated and revised to 2.7.640.D.1.d)

~~M. Floodways. Located within areas of special flood hazard established in subsection (B)(1) of this section, Application of FP Zone, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:~~

~~1. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.~~

2. If subsection (M)(1) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of subsection (G) of this section, Regulations of Structures in an FP Zone.

(Revised and relocated to 2.7.640.D.2.d)

N. Before Regulatory Floodway. In areas where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zone AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community. ***(Revised and relocated to 2.7.640.D.2.c.i)***

O. Critical Facilities. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible. ***(Relocated to BDC 2.7.640.D.1.i)***

P. Technical Variances. A technical variance from the requirements of this section may be granted by the Hearings Body for new construction and for improvements to existing structures which could not otherwise be authorized, provided the construction or improvements are to be erected or installed on a parcel of land one-half acre or less in size, contiguous to or more or less surrounded by lots with existing structures constructed below the minimum floor elevation established for flood protection purposes. A parcel of land in excess of one-half acre in single ownership on the effective date of the ordinance codified in this code is not excluded from the granting of a technical variance, but the burden of proof required for issuing the variance increases as the size of the property under single ownership increases, and the variance shall be granted only if required to equalize circumstances, considering previously developed land adjacent to the parcel for which a variance is sought. ***(Revised and relocated to 2.7.640.E, Floodplain Variance)***

Q. Historic Variance. A variance for historic preservation may be granted for the reconstruction, rehabilitation or restoration of a structure listed on the National Register of Historic Places or the State Inventory of Historic Places. ***(Definition of Substantial Improvement exempt regulation of historic structures.)***

R. Other Variances. All other variance applications shall be considered according to the terms of BDC Chapter 5.1.

~~1. Applicants for a variance shall include with their application the following information:~~

~~a. The location of the property with reference to channel station and flood profile elevation.~~

~~b. The existing topography and proposed grading plan for the property. Contour intervals shall not be more than one foot for ground slopes up to five percent and for areas immediately adjacent to a stream, two feet for ground slopes between five and 10 percent, and five feet for greater slopes.~~

~~c. The location of existing and proposed diking or revetments if any.~~

(Revised and relocated to 2.7.640.E, Floodplain Variance)

E. ***Floodplain Variance.*** The issuance of a variance is for floodplain management purposes only. Flood insurance premium rates are determined by federal statute according to actuarial risk and will not be modified by the granting of a variance.

1. ***Conditions for Variances.***

a. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the provisions of subsections 2.7.640(E)(1) (c) and (e) of this section, and subsection 2.7.640(E)(3) of this section. As the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases.

b. Variances must only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

c. Variances must not be issued within any floodway if any increase in flood levels during the base flood discharge would result.

d. Variances must only be issued upon:

i. A showing of good and sufficient cause;

ii. A determination that failure to grant the variance would result in exceptional hardship to the applicant;

iii. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.

(Relocated from 5.1.400.B.5.e.i-iii)

e. Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that the criteria of subsection 2.7.640(E)(1)(b) – (d) are met, and the structure or other development is

protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

2. Applicants for a variance must include with their application the following information:

a. The location of the property with reference to channel station and flood profile elevation.

b. The existing topography and proposed grading plan for the property. Contour intervals must not be more than one foot for ground slopes up to five percent and for areas immediately adjacent to a stream, two feet for ground slopes between five and 10 percent, and five feet for greater slopes.

c. The location of existing and proposed diking or revetments if any.

(Relocated from 2.7.640.R.1)

3. Variance Notification. Any applicant to whom a variance is granted must be given written notice that the issuance of a variance to construct a structure below the base flood elevation will result in increased premium rates for flood insurance and that such construction below the base flood elevation increases risks to life and property. Such notification and a record of all variance actions, including justification for their issuance must be maintained in accordance with subsection 2.7.640(C)(2)(b) of this section.

(Revised and relocated from 5.1.400.B.5.h)

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Chapter 4.9
ANNEXATIONS

4.9.800 Effective Date and Notice of Approved Annexation.

A. The effective date of an approved annexation must be set in accordance with ORS 222.040 or 222.180.

B. Notice of Approved Annexation.

1. Not later than 10 working days after the passage of an ordinance approving an annexation, the Planning ~~Director~~ Manager will:

a. Send by certified mail a notice to public utilities (as defined in ORS 757.005), electric cooperatives and telecommunications carriers (as defined in ORS 133.721) operating within the City.

b. Mail a notice of the annexation to the Secretary of State, Department of Revenue, Deschutes County Clerk, Deschutes County Assessor, affected districts, and owners and electors in the annexed territory. The notice must include:

i. A copy of the ordinance approving the annexation;

ii. A legal description and map of the annexed territory;

iii. The findings; and

iv. Each site address to be annexed as recorded on Deschutes County assessment and taxation rolls.

c. The notice to the Secretary of State will also include a copy of the statement of consent as required in BDC 4.9.400, Initiation Procedures.

2. If the effective date of an annexation is more than one year after the City Council passes the ordinance approving it, the Planning Director will mail a notice of the annexation to the Deschutes County Clerk not sooner than 120 days and not later than 90 days prior to the effective date of the annexation.

3. ***Community Boundary Alterations***. The floodplain administrator must notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community's boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority.

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Chapter 5.1

VARIANCES

***

5.1.400 *Class C Variances*.

A. Purpose. A variance request can be specific to certain aspects of development. The purpose of this section is to provide specific criteria for reviewing certain variance requests. The specific situations identified as Class C Variances include:

1. Variance to parking standards.
2. Variance to maximum or minimum on-site development requirements to reduce tree removal and/or impacts to wetlands (Waterway Overlay Zone).
3. Variance to maximum height.
4. Variance to vehicular access and circulation standards.
5. Floodplain ~~Sub-Zone~~ variances. See BDC 2.7.640.E, Floodplain Variance.

The applicant ~~shall~~ must provide a written narrative or letter describing the reason for the variance, why it is required, alternatives considered, and compliance with the approval criteria.

B. Class C Variance Criteria. Class C variance requests are reviewed using the specific criteria listed below.

***

~~5. *Variances to Floodplain Sub-Zone.*~~

a. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size that is contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing subsections (B)(5)(a)(i) through (xi) of this section have been fully considered. As the lot size increases, the technical justification required for issuing the variance increases. The City must approve, approve with conditions, or deny an application for a variance based on all of the following criteria:

i. The danger that materials may be swept onto other lands to the injury of others;

ii. The danger to life and property due to flooding or erosion damage;

iii. The susceptibility of the proposed development and its contents to flood damage and the effect of such damage on the individual owner;

iv. The importance of the services provided by the proposed development to the community;

v. The necessity to the development of a waterfront location, where applicable;

vi. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

vii. The compatibility of the proposed use with existing and anticipated development;

viii. The relationship of the proposed use to the Comprehensive Plan and floodplain management program for that area;

ix. The safety of access to the property in times of flood for ordinary and emergency vehicles;

x. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and

xi. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

b. A variance may be issued for the reconstruction, rehabilitation, or restoration of a structure listed on the National Register of Historic Places or the State Inventory of Historic Places per this subsection (B)(5).

c. A variance shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

d. A variance shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

e. A variance shall only be issued upon:

i. A showing of good and sufficient cause;

ii. A determination that failure to grant the variance would result in exceptional hardship to the applicant;

iii. A determination that the granting of the variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in this section, or conflict with existing local laws or ordinances.

f. A variance as interpreted in the National Flood Insurance Program is based on the general zoning law principle that it pertains to a physical piece of property; it is not personal in nature and does not pertain to the structure, its inhabitants, economic or financial circumstances. It primarily addresses small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

g. A variance may be issued for a nonresidential building in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection (B)(2) of this section and otherwise complies with BDC 2.7.600, Waterway Overlay Zone (WOZ).

h. Any applicant to whom a variance is granted shall be given notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of the flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

(Revised and relocated to 2.7.640.E, Floodplain Variance)

EXHIBIT B
FINDINGS OF FACT
BEND DEVELOPMENT CODE (BDC) UPDATE
AMENDMENT PLTEXT20240438

I. PROCEDURAL FINDINGS:

(1) PUBLIC NOTICE AND COMMENTS. Notice of the BDC amendments was provided to the Department of Land Conservation and Development (DLCD) on July 30, 2024. A notice of the September 9, 2024, Planning Commission public hearing was printed in the Bend Bulletin on August 18, 2024, and mailed and emailed to the Neighborhood Districts on August 16, 2024. Staff emailed the proposed amendments to the Bend Development Code Update Group and to the Neighborhood District Land Use Chairs on July 30, 2024. A notice of the October 16, 2024, City Council public hearing was printed in the Bend Bulletin on September 22, 2024, and mailed and emailed to the Neighborhood Districts Land Use Chairs on September 16, 2024. Public comments can be viewed in the Online Permit Center Portal on the City of Bend website. Open the Portal and select the *Application Search* link under the Planning & Historic header, then enter the project number PLTEXT20240438 in the search bar to find the project.

(2) RECORD. The documents in CityView for PLTEXT20240438 are made part of the record and are placed before the Planning Commission and City Council for consideration during the proceedings on the legislative amendments. The documents are available for review and can be viewed in the Online Permit Center Portal on the City of Bend website by opening the portal and selecting the *Application Search* link under the Planning & Historic header, then enter the project number PLTEXT20240438 in the search bar to find the project.

(3) PROPOSAL. The City of Bend is proposing a package of amendments to the Bend Development Code (BDC). The primary purpose of the proposed amendments is to implement the Oregon Model Flood Hazard Management Ordinance. The proposed amendments are to BDC Chapters 1.2, Definitions; 2.7, Special Planned Districts, Refinement Plans, Area Plans and Master Plans; 4.9, Annexations and 5.1, Variances. The recommended amendments are attached as Exhibit A.

The amendments rename BDC 2.7.640, Floodplain Combining Zone to Floodplain Zone and will be referred to herein as the Floodplain Zone.

II. CRITERIA OF APPROVAL:

(1) The Bend Comprehensive Plan

(2) Bend Development Code

(a) Chapter 4.6, Land Use District Map and Text Amendments; Section 4.6.200(B), Criteria for Legislative Amendments

III. APPLICABLE PROCEDURES:

(1) Bend Development Code
(a) Chapter 4.1, Land Use Review and Procedures

IV. FINDINGS REGARDING COMPLIANCE WITH APPLICABLE CRITERIA:

CONFORMANCE WITH CITY OF BEND DEVELOPMENT CODE, CHAPTER 4.6, LAND USE DISTRICT MAP AND TEXT APMENDMENTS

4.6.200 Legislative Amendments.

A. Applicability, Procedure and Authority. Legislative amendments generally involve broad public policy decisions that apply to other than an individual property owner. These include, without limitation, amendments to the text of the comprehensive plan and map, Development Code and changes in the zoning map not directed at a small number of properties. They are reviewed using the Type IV procedure in accordance with Chapter 4.1, Land Use Review and Procedures and shall conform to Section 4.6.600, Transportation Planning Rule Compliance. A Legislative Amendment may be approved or denied.

FINDING: The recommended amendments to the BDC involve broad public policy rather than application to an individual property owner. Therefore, the Legislative Amendment Procedures of this section are the appropriate procedures for this review.

B. Criteria for Legislative Amendments. The applicant shall submit a written narrative which explains how the approval criteria will be met. A recommendation or a decision to approve or to deny an application for a Legislative Amendment shall be based on all of the following criteria:

1. The request is consistent with the applicable State land use law;

FINDING: The amendments are consistent with the applicable State land use law. In particular they satisfy Goal 1: Citizen Involvement, Goal 2: Land Use Planning, Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces and Goal 7, Areas Subject to Natural Hazards and maintain Goal 6: Air, Water and Land Resources Quality, Goal 10: Housing and Goal 11: Public Facilities and Services.

Goal 1, Citizen Involvement, is satisfied by following the City's acknowledged text amendment process that includes a Planning Commission public hearing, followed by a City Council public hearing.

FINDING: Notice of the BDC amendments was provided to the Department of Land Conservation and Development (DLCD) on July 30. 2024. A notice of the September 9, 2024, Planning Commission public hearing was printed in the Bend Bulletin on August 18, 2024, and mailed and emailed to the Neighborhood Districts on August 16, 2024. Staff emailed the proposed amendments to the Bend Development Code Update Group and to the Neighborhood District Land Use Chairs on July 30, 2024. A notice of the October 16, 2024,

City Council public hearing was printed in the Bend Bulletin on September 22, 2024, and mailed and emailed to the Neighborhood Districts Land Use Chairs on September 16, 2024.

On September 9, 2024, the Planning Commission held a public hearing and recommended approval of the amendments to the City Council. The City Council held a public hearing on October 16, 2024, to accept evidence, receive public testimony, and consider the Planning Commission's recommendation.

Therefore, Goal 1 has been met.

Goal 2, Land Use Planning, requires a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.

FINDING: The Goal is met because the City followed the land use planning process and policy framework established in the City's acknowledged Comprehensive Plan and BDC as a basis for the decisions and actions related to the new regulations regarding the use of land and to assure an adequate factual base for these decisions and actions. The amendments will be considered by the City Council after a public hearing. Multiple opportunities were provided for review and comment by community members and affected governmental units during the preparation of the amendments.

Goal 2 specifically states that minor plan changes should be based on special studies or other information, which will serve as the factual basis to support the change. The public need and justification for the particular change should be established.

The amendments update BDC 2.7.640, Floodplain Zone to comply with the Oregon Model Flood Hazard Management Ordinance. The Ordinance was developed to help communities achieve compliance with the minimum National Flood Insurance Program (NFIP) and state standards for floodplain management. The Ordinance includes standards and provisions that encourage sound floodplain management. The language is based on the minimum requirements of the NFIP found in the Code of Federal Regulations (CFRs), Oregon's statewide land use planning Goal 7, Areas Subject to Natural Hazards, and the Oregon specialty codes. The Ordinance was prepared by DLCD and has been reviewed and approved by Federal Emergency Management Agency (FEMA) Region X.

In addition to the minimum requirements in the Ordinance, FEMA and DLCD encourage local governments to adopt higher standards that make sense for each community and their unique flood risk. The amendments to BDC 2.7.640, Floodplain Zone maintain existing higher standards in the BDC which include requiring new construction, conversion to, and substantial improvement of any residential structure to have the lowest floor, including basement, elevated a minimum of one foot above base flood elevation. The amendments also maintain higher standards for critical facilities and below grade crawl space.

In addition, the amendments include a new standard that goes beyond the minimum requirements of the Ordinance by requiring the applicant to be responsible for preparing all technical data to support Conditional Letter of Map Revision (CLOMR)/ Letter of Map

Revision (LOMR) applications and paying any processing fees associated with the CLOMR/LOMR.

Adopting amendments implementing the Ordinance along with the higher standards benefits the community by reducing risks to people and property in areas that are subject to flooding. Therefore, the amendments are justified and needed, and compliance with Goal 2 is met.

Goal 3, Agricultural Lands and Goal 4, Forest Lands. Goals 3 and 4 are not applicable because there are no Agricultural or Forest Lands in the City.

Goal 5, Natural Resources, Scenic and Historic Areas, and Open Spaces, requires the City to protect natural resources and conserve scenic and historic areas and open spaces.

The Waterway Overlay Zone (WOZ) is intended to conserve and enhance the natural resource values of areas along the Deschutes River and Tumalo Creek within the City by promoting development that is compatible with the purposes of the WOZ. The WOZ includes the following sub-zones:

1. Riparian Corridor.
2. Deschutes River Corridor Design Review.
3. River Corridor Areas of Special Interest.
4. Floodplain.

The WOZ combines regulation of the Floodplain with regulation of the Riparian Corridors as well as Design Review that restrict the proximity of development to the river in order to preserve the natural look and function of the river. This has the effect of limiting or eliminating development within the Floodplain Zone and protecting the open space along the river. The amendments to the Floodplain Zone comply with the Oregon Model Flood Hazard Management Ordinance and continue to protect natural resources and conserve scenic areas and open spaces.

Therefore, Goal 5 and the City's acknowledged regulations implementing Goal 5 remain in effect with no change in applicability and compliance with Goal 5 is met.

Goal 6, Air, Water and Land Resources Quality, addresses water and process discharges from development, and is aimed at protecting air, water, and land from impacts from those discharges. Floodplains provide multiple benefits including flood protection and erosion control, improved water quality and improved wildlife habitat. The amendments do not affect the City's ability to maintain and improve air, water or land resources. The City's acknowledged regulations implementing Goal 6 remain in effect with no change in applicability. The amendments will continue to regulate development in the Floodplain Zone, with updated definitions and administrative procedures, and therefore, compliance with Goal 6 is maintained.

Goal 7, Areas Subject to Natural Hazards, requires the City to protect people and property from natural hazards.

FINDING: Goal 7 requires local jurisdictions to adopt comprehensive plans (inventories,

policies and implementing measures) to reduce risk to people and property from natural hazards. Implementation of Goal 7 states, “Local governments will be deemed to comply with Goal 7 for coastal and riverine flood hazards by adopting and implementing local floodplain regulations that meet the minimum National Flood Insurance Program (NFIP) requirements.” The amendments update BDC 2.7.640, Floodplain Zone to comply with the Oregon Model Flood Hazard Management Ordinance. The Ordinance was developed to help communities achieve compliance with the minimum NFIP and state standards for floodplain management. The Ordinance was prepared by DLCD and has been reviewed and approved by FEMA Region X.

Goal 7 Guidelines encourage local governments to consider measures that exceed the NFIP. The BDC amendments maintain existing standards that go beyond the minimum requirements of the model floodplain ordinance by requiring new construction, conversion to, and substantial improvement of any residential structure to have the lowest floor, including basement, elevated a minimum of one foot above base flood elevation.

Goal 7 Guidelines also state, “Local governments should give special attention to emergency access when considering development in identified hazard areas.” The BDC amendments retain current standards that require access to and from critical facilities ((BDC 2.7.640(D)(1)(i)). In addition, Goal 7 Guidelines state, “When reviewing development requests in high hazard areas, local governments should require site-specific reports, appropriate for the level and type of hazard (e.g., hydrologic reports, geotechnical reports or other scientific or engineering reports) prepared by a licensed professional. Such reports should evaluate the risk to the site as well as the risk the proposed development may pose to other properties.” The amendments retain a current BDC requirement to the floodways section that requires hydrologic and hydraulic analyses be performed to ensure proposed encroachments in the floodway would not result in an increase in flood levels (BDC 2.7.640(D)(2)(d)(i)).

The Ordinance also includes recommended options for higher standards which can provide benefits to the community, including financial savings on individual flood insurance policies. The BDC amendments include a new higher standard by requiring the applicant to be responsible for preparing all technical data to support Conditional Letter of Map Revision (CLOMR)/ Letter of Map Revision (LOMR) applications and paying any processing fees associated with the CLOMR/LOMR. In addition, the amendments maintain current higher standards for critical facilities and below grade crawl spaces.

Therefore, compliance with Goal 7 is met.

Goal 8, Recreational Needs, requires the City to satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts. This goal is not applicable as the amendments have no effect on the availability of or access to recreational opportunities.

Goal 9, Economic Development, is implemented through Oregon Administrative Rule (OAR) Division 9, which is intended to ensure that each jurisdiction maintain an adequate land supply for economic development and employment growth. This goal is not applicable as the amendments have no effect on land supply for economic development or employment

growth.

Goal 10, Housing, requires that communities provide for the housing needs of citizens of the state. The Goal also requires cities to inventory its buildable residential lands, project future needs for such lands, and plan and zone enough buildable land to meet those needs. It also prohibits local plans from discriminating against needed housing types.

The amendments regulate development in the Floodplain Zone; however, the City does not count areas within the Floodplain Zone in its housing lands inventory. The 100-year floodplain is listed explicitly in the exclusions contained within the definition of buildable land in OAR 660-008-0005(2). In addition, according to the 2016 Bend Buildable Lands Inventory, land that is physically constrained is not assumed to be "buildable". Land was identified as constrained if it: has 25% or greater slopes; is within the Federal Emergency Management Agency (FEMA) 100-year floodplain; is within a river or upland Area of Special Interest (ASI); or is within the Waterway Overlay Zone (WOZ) and within 100 feet of the Deschutes River, where building setbacks may apply.

Thus, the amendments do not reduce the development potential of Bend's housing land inventories. Therefore, compliance with Goal 10 is maintained.

Goal 11, Public Facilities and Services, requires the City to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. The amendments will not result in the need to adjust or amend existing policies or projects in the City's adopted facility plans. Updated regulations ensure that new or replaced water or sanitary systems are designed to minimize or eliminate infiltration of flood waters into the systems. Therefore, compliance with Goal 11 is maintained.

Goal 12, Transportation, requires the City to provide and encourage a safe and convenient and economic transportation system. The amendments are not site specific and therefore do not affect the functional classification of any street. The amendments will have no immediately measurable impacts on the amount of traffic on the existing transportation system; therefore, the amendments do not cause a "significant effect" under ORS 660-012-0060. Therefore, compliance with Goal 12 has been met.

Goal 13, Energy Conservation is not applicable because the City's acknowledged regulations implementing Goal 13 remain in effect with no change in applicability.

Goal 14, Urbanization, requires the City to provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities. The amendments do not encourage sprawl or lower than targeted densities, or uncoordinated development. The management of the City's land use inventories is unaffected by these amendments and therefore, the City's long-standing acknowledgment of compliance with Goal 14 is maintained.

Goal 15, Willamette River Greenway, Goal 16, Estuarine Resources, Goal 17, Coastal Shorelands, Goal 18, Beaches and Dunes, and Goal 19, Ocean Resources are not

applicable to the BDC amendments.

Based on the above discussion, the amendments to the BDC are consistent with the statewide planning goals and therefore comply with the requirement that the amendments be consistent with state land use planning law.

Because the amendments are limited in scope, there are no other Administrative Rules applicable to this amendment. Likewise, there are no other applicable Oregon Revised Statutes that are criteria applicable to these amendments (Note, consistency with the Transportation Planning Rule (TPR) is discussed further in this document).

2. **The request is consistent with the applicable Bend Comprehensive Plan goals and policies;**

FINDING: The "goals" established in the Comprehensive Plan express the desires of the residents of Bend as the City progresses into the future. The "goals" are generally carried out through "policies," which are statements of public policy. The following Goals and Policies are applicable:

Chapter 1: Plan Management and Citizen Involvement

Goals

- **Protect and Enhance Bend's Natural Beauty, Heritage and Natural Environment** As Bend grows, it preserves and enhances natural areas and wildlife habitat. Protect and enhance Bend's natural beauty noting especially the trees, rocks, rivers, view, sounds and historic structures. Wildfire risk management is a key consideration. Bend takes a balanced approach to environmental protection and building a great city.

FINDING: Development is minimal in the Floodplain Zone. This is augmented by the fact that the floodplain is fairly narrow along the Deschutes River as it winds through Bend. A number of water control structures along the river, both within the city limits and upstream, have managed the water flow and keep the river within its banks for the most part. The amendments will continue to protect and enhance the natural beauty of the Floodplain Zone by regulating the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters. The amendments will also prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

- **Ensure Quality Design and Attractive Development** Ensure that the "built" environment is as attractive as feasible.

FINDING: The amendments will help ensure that the built environment stays as attractive as feasible by providing for the sound use and development of areas in the Floodplain Zone in order to minimize future flood blight areas caused by flooding.

- **Promote Public and Civic Involvement.** Encourage involvement by all citizens, corporate and individual, to keep the city vital and the Plan an “evolving vision”.

FINDING: Staff emailed the proposed amendments to the Bend Development Code Update Group and to the Neighborhood District Land Use Chairs on July 30, 2024. The Bend Development Code Update Group includes community members comprised of architects, lawyers, developers, land use planners, and engineers and staff from COBA, Oregon LandWatch and Bend Park and Recreation District as well as people who are generally interested in amendments to the BDC.

On September 9, 2024, the Planning Commission held a public hearing and recommended approval of the amendments to the City Council. The City Council held a public hearing on October 16, 2024, to accept evidence, receive public testimony, and consider the Planning Commission’s recommendation.

- **Create Clear and Consistent Implementing Ordinances.** Implement the plan through effective, clear and consistent ordinances and language that reflect the intent of the vision.

FINDING: The amendments to BDC 2.7.640, Floodplain Zone are in compliance with Oregon Model Flood Hazard Ordinance, which was prepared by DLCD and has been reviewed and approved by FEMA Region X. Adoption of the Ordinance language provided will ensure compliance with the minimum standards for participation in the National Flood Insurance Program (NFIP). Therefore, the amendments are effective, clear and consistent.

Policies
Citizen Involvement

1-15. The city shall continue to use advisory committees in their planning process, members of which are selected by an open process, and who are widely representative of the community.

1-16. The city will use other mechanisms, such as, but not limited to, meetings with neighborhood groups, planning commission hearings, design workshops, and public forums, to provide an opportunity for all the citizens of the area to participate in the planning process.

FINDING for 1-15 and 1-16: Notice of the BDC amendments was provided to the Department of Land Conservation and Development (DLCD) on July 30. 2024. A notice of the September 9, 2024, Planning Commission public hearing was printed in the Bend Bulletin on August 18, 2024, and mailed and emailed to the Neighborhood Districts on August 16, 2024. Staff emailed the proposed amendments to the Bend Development Code Update Group and to the Neighborhood District Land Use Chairs on July 30, 2024. A notice of the October 16, 2024, City Council public hearing was printed in the Bend Bulletin on September 22, 2024, and mailed and emailed to the Neighborhood Districts Land Use Chairs on September 16, 2024. The Bend Development Code Update Group includes community members comprised of architects, lawyers, developers, land use planners, and engineers and staff from COBA, Oregon LandWatch and Bend Park and Recreation District as well as people who are generally interested in amendments to the BDC.

On September 9, 2024, the Planning Commission held a hybrid public hearing, considered any public comment received, and recommended approval of the amendments to the City Council. The City Council held a public hearing on October 16, 2024, to accept evidence, receive public testimony, and consider the Planning Commission's recommendation.

Therefore, compliance with Chapter 1 has been met.

Chapter 2: Natural Features and Open Space

Goals:
- to preserve interesting and distinct geologic formations and areas of natural vegetation.
- to preserve water resources, riparian areas, and wildlife habitats.
- to shape the urban development and provide visual relief from developed land.

FINDING: Through the appropriate management of development within the floodplain in compliance with the amendments to BDC 2.7.640, Floodplain Zone, the natural features and open space areas in the Floodplain Zone will be preserved.

- to support the coordinated efforts of public agencies, private organizations and individuals to preserve and enhance the area's natural features and open space.

FINDING: Adopting the BDC amendments that implement the Oregon Model Flood Hazard Management Ordinance supports the work of several public agencies including DLCD and FEMA Region X. The BDC amendments will continue to regulate development in the Floodplain Zone and therefore will have a direct effect on protecting the natural features and open space in the area.

Policies

Natural Features and Open Space

2-6 Major rock outcrops, stands of trees, or other prominent natural features identified in the Comprehensive Plan shall be preserved as a means of retaining the visual character and quality of the community.

FINDING: There are no changes proposed to any rock outcrops, stands of trees, or other prominent natural features identified in the Comprehensive Plan. The native fauna and flora will continue to be protected as required in BDC Article V. Waterway Overlay Zone (WOZ).

2-10 The City shall participate with other governments, special districts, non-profit organizations, land trusts, interested businesses, and citizens in protecting open space.

FINDING: Adopting the BDC amendments that implement the Oregon Model Flood Hazard Management Ordinance supports the work of several public agencies including DLCD and FEMA Region X. The BDC amendments will continue to regulate development in the Floodplain Zone and therefore will have a direct effect on protecting the natural features and

open space in the area.

2-14 The City will consider how best to protect important native fauna and flora within the Bend urban area, as identified by the open space and natural features inventory.

FINDING: There are no changes proposed to the boundaries of the Waterway Overlay Zone (WOZ), or mapped natural features in other overlay zones, area plans, or master plans. The native fauna and flora will continue to be protected as required in BDC Article V. Waterway Overlay Zone (WOZ)

Deschutes River Corridor

2-16 Within the Areas of Special Interest designated on the Plan Map, the city and county may allow developments that carry out the intent of the Plan to enhance the variety and livability of the Bend Urban Area, and provided that such developments:

- are not subject to natural hazards;
- would not inflict irreversible harm to the riparian zone;
- would enhance public open space, parks and access;
- are designed to be compatible with natural features; and
- provide access to the river or a trail along the river corridor to the extent allowed by law.

FINDING: All development within the Floodplain Zone and Areas of Special Interest will continue to be subject to BDC 2.7.630, River Corridor Areas of Special Interest and to the amendments to BDC 2.7.640, Floodplain Zone. The amendments restrict or prohibit development which is dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities. The amendments also require that development vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.

2-17 The City shall prepare development regulations to further reduce visual and ecological impacts of development along Tumalo Creek and the Deschutes River.

FINDING: The amendments to BDC 2.7.640, Floodplain Zone will help reduce impacts from flooding by maintaining the river in its natural state by regulating the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters. The amendments will also prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

Therefore, the amendments satisfy Chapter 2, Natural Features and Open Space.

Chapter 8: Public Facilities and Services

Goals

- To ensure that public services will not negatively impact the environment or the community; and
- To locate and operate public buildings and other public facilities to best serve the needs of the residents.

FINDING: A critical facility means, for the purpose of flood standards, a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use or store hazardous materials or hazardous waste.

The BDC amendments require, to the extent possible, the construction of a new critical facility to be located outside the limits of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of a new critical facility is permissible within the SFHA if no feasible alternative site is available. A critical facility constructed within the SFHA must have the lowest floor elevated three feet above the Base Flood Elevation (BFE) or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility must also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. These requirements ensure that the critical facilities will not negatively impact the environment and that they will be located and constructed accordingly to service the needs of the residents.

Storm Drainage Facilities and Systems

8-32 The City shall seek efficiencies and consistency by working with other municipalities and stakeholders within Central Oregon on land use issues to address flood control, watershed health and stormwater pollution prevention.

FINDING: Adopting the BDC amendments that implement the Oregon Model Flood Hazard Management Ordinance supports the work of several public agencies. The Oregon Model Flood Hazard Management Ordinance was prepared by the DLCD and reviewed and approved by FEMA Region X.

8-33 Hazard and resource areas with the following characteristics shall be considered unsuitable for urban development:

- flood zones;
- water supply watersheds; and
- riparian corridors and natural drainageways.

FINDING: The amendments to BDC 2.7.640, Floodplain Zone aim to reduce flood losses to life and property while simultaneously protecting the natural resources and functions of floodplains.

Development within the Floodplain Zone must comply with the BDC amendments and the Oregon Specialty Codes to avoid and minimize potential risk to development from flood hazards.

8-35 The City shall regulate development near water courses to reduce erosion and pollution and to provide open, natural areas.

FINDING: The amendments to BDC 2.7.640, Floodplain Zone restrict or prohibit development in the Floodplain Zone which helps reduce erosion. In addition, due to limited development in the floodplain, open natural areas are provided.

8-36 Land uses that pose a major threat to water quality, including commercial and industrial uses such as automobile dismantlers, waste transfer disposal facilities, light industries, and other uses that have a significant potential for pollution, shall not be located within the vicinity of stream, percolation facilities, reservoirs, drill holes or where pollutants could easily come in contact with flood waters, high groundwater, flowing rivers, or reservoirs. Such uses shall be required to reduce any threat of pollution to an insignificant level as a condition of approval.

FINDING: The WOZ includes four different sub-areas: the Deschutes River Corridor Design Review overlay; the Floodplain Combining Zone; Riparian Corridor zone; and River Corridor ASIs. Each sub-area has its own set of standards and setbacks for protection. Setbacks vary from 30 to 100 feet depending on the stretch of river and the sub-zone; some are measured from ordinary high water, while others are measured from the canyon rim. The amendments to the Floodplain Zone include standards and provisions that encourage sound floodplain management, and the current setback requirements are not changing. Therefore, the amendments and the required setbacks will continue to protect the river corridors from development and any subsequent pollution.

8-39 The City shall require the following stormwater protection measures for all new development and redevelopment proposals during the planning, project review, and permitting processes:

- Submit geotechnical site assessments when dry wells or other infiltration or injection systems are proposed.

- Avoid conversion of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) or establish development guidance that identifies these areas and protects them from erosion and sediment loss.

- Retain natural drainage channels in their natural state to prevent undue erosion of banks or beds, and preserve or restore areas that provide water quality or quantity benefits and/or are necessary to maintain riparian and aquatic biota.

- Promote site development that limits impacts on, and protects the natural integrity of topography, drainage systems, and water bodies.

- Promote integration of stormwater quality protection into construction and post-construction activities at all development and redevelopment sites.

FINDING: The amendments to BDC 2.7.640, Floodplain Zone will continue to reduce impacts by regulating the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters. The amendments will also prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas. These amendments maintain the river in its natural state and reduce impacts.

Therefore, the amendments satisfy Chapter 8, Public Facilities and Services.

Chapter 10: Natural Forces

Goals

- to work with state and federal agencies to develop new, more accurate mapping data on flood plains, faults, and other local natural hazards within the urban areas.

FINDING: The City of Bend works with FEMA, DLCD, and other agencies to ensure accurate flood plain mapping data. The most recent FEMA Flood Insurance Rate Maps (FIRM) showing Special Flood Hazard Areas (SFHA) in the City of Bend are dated September 28, 2007. The City of Bend also participates in Letter of Map Change (LOMC) requests.

Natural Hazards

10-12 The city shall continue to apply their Flood Plain zoning regulations along the Deschutes River and Tumalo Creek based on the best available data.

FINDING: The Oregon Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in special flood hazard areas. The updated definitions and regulations in BDC 2.7.640, Floodplain Zone are intended to be administered and enforced in conjunction with the Oregon Specialty Codes. Therefore, City building codes and the proposed BDC amendments will continue to regulate the development within the floodplain zone of the Deschutes River and Tumalo Creek.

Therefore, the amendments satisfy Chapter 10, Natural Forces.

Based on the findings stated above, the Planning Commission concludes that the amendments are consistent with the applicable Bend Comprehensive Plan Goals and Policies.

3. **The applicant can demonstrate a public need or benefit for the proposed amendment.**

FINDING: The Oregon Model Flood Hazard Management Ordinance has been prepared by DLCD and has been reviewed and approved by FEMA Region X. The model flood hazard ordinance includes updated definitions, standards and provisions that encourage sound floodplain management. The language is based on the minimum requirements of the NFIP found in the Code of Federal Regulations (CFRs), Oregon's statewide land use planning Goal 7, and the Oregon specialty codes. Adoption of the amendments, including recommended higher standards, will ensure compliance with NFIP and will provide a public need and benefit by reducing risk to people and property in the Floodplain Zone.

4.6.500 Record of Amendments.

The City Recorder shall maintain a record of amendments to the text of this Code and the land use districts map in a format convenient for public use.

FINDING: In the event the BDC text amendments are adopted by ordinance, the City Recorder will maintain a record of the amendments and the revised provisions will be included as part of the BDC available to the public on the City's website.

4.6.600 Transportation Planning Rule Compliance.

When a development application includes a proposed comprehensive plan amendment or land use district change, or both, the proposal shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060.

FINDING: The new text amends the BDC which is a functional component of the Bend Comprehensive Plan and is an amendment to a land use regulation as noted in OAR 660-012-0060. The amendments are not tied to any one development application and do not affect the functional classification of any street. These amendments do not change allowable uses or change regulations that result in the generation of additional vehicle trips; therefore, the amendments will have no immediately measurable impacts on the amount of traffic on the existing transportation system. Because of this, the text amendments do not cause a "significant effect" under ORS 660-012-0060.

V. CONCLUSIONS:

Based on the above Findings, the amendments meet all applicable criteria for adoption.